

**POSTER PRESENTATIONS  
ST. JOHN'S CONVENTION CENTRE**

**TUESDAY, MAY 12, 2009  
10:10 am – 10:50 am  
(See Final Program for Poster Board number)**

**OUTBREAK BINDERS: A QUICK REFERENCE TOOL**

Stefanie Ralph<sup>1</sup>, Judy DeGrosbois<sup>2</sup>: <sup>1</sup>Norfolk General Hospital, Simcoe, Ontario, Canada, <sup>2</sup>Perth District Health Unit, Stratford, Ontario, Canada

**Issue:** Effective outbreak management needs to be thorough and consistent. An enteric outbreak occurred in our hospital the day before the full time ICP left on holidays. A brand new part time ICP and the Vice President of Patient Care managed the outbreak. It was identified that for a small facility, where Infection Control back-up does not run deep, a quick reference tool for outbreak management could be valuable.

**Project:** Reference binders for enteric and respiratory outbreaks were completed. Contents include: outbreak and case definitions, contact numbers, "to do" checklists, assessment tools, control measure checklists, meeting templates, blank line listings, ready to post signs, scripts for switchboard, fact sheets, decision making framework, and references. Full versions of the Outbreak Binders are stored in the Infection Control and Vice President of Patient Care Offices, and the Administrator On Call Kit.

**Results:** The reference binders have been used for two confirmed and several potential outbreaks since their creation in February 2008. Having document templates makes the collection of data, communication, and meeting organization much simpler. The outbreak binders also help ensure small details are not overlooked. Contents of outbreak binders presented at CHICA-HANDIC during an education session. Central South Regional Infection Control Network is currently adapting the idea, and investigating providing novice ICP's with a similar document in CD-ROM format.

**Lessons Learned:** Creating reference binders decreases time and stress spent on outbreak management. Reference binders are useful tools for designates of Infection Control programs in smaller facilities.

**DISCHARGE/TRANSFER TERMINAL ENVIRONMENTAL CLEANING - A REFERENCE CHART FOR PATIENT CARE UNITS**

Bronwen Edgar, Mary Vearncombe, Sandra Callery; Sunnybrook Health Sciences Centre, Toronto, Ontario, Canada

**Issue:** The healthcare environment plays an important role in the spread of pathogens such as *Clostridium difficile* and antimicrobial resistant organisms such as methicillin-resistant *Staphylococcus aureus* (MRSA) and vancomycin-resistant enterococcus (VRE). The importance of thorough cleaning to reduce the spread of microbial contamination in hospitals is being increasingly recognized.

While hospital cleaning staff are trained to clean patient rooms daily and upon discharge, there is often confusion around the additional cleaning measures that may be required for patients on Additional Precautions.

**Project:** An easy to follow reference chart for terminal cleaning of patient rooms upon patient discharge or transfer was developed in collaboration with Environmental Services, Nursing, and Infection Prevention & Control. The chart focuses on specific cleaning instructions for organisms of interest such as MRSA, VRE, *C. difficile*, Norovirus, and *Mycobacterium tuberculosis*. It provides specific instructions on type of disinfectant, method of cleaning and items to be cleaned or replaced.

**Results:** The chart was presented at patient unit staff meetings and/or posted throughout the units and is also available on the hospital intranet. Feedback from unit nursing and support staff has been positive. It is hoped that this reference chart will decrease the number of calls after hours to clarify room cleaning requirements for patients on Additional Precautions.

**Lessons Learned:** An audit tool is being developed, based on the cleaning tasks in this chart. The audit tool will help to identify gaps in our current cleaning process and training materials, including the reference chart.

### **Assessment Of The Knowledge And The Predictors of Behavior In Patient Service Assisants (PSAs) Regarding Environmental Cleaning In a Pediatric Hospital**

Anne Matlow, Richard Wray, Susan Richardson; *The Hospital for Sick Children, Toronto, Ontario, Canada*

Background: Studies have shown that education improves environmental cleaning but does not eliminate contamination in healthcare settings. Objective: To assess the impact of PSAs' knowledge, attitudes and beliefs on cleaning intentions in hospital. Methods: An anonymous questionnaire was distributed to 30 PSAs working in intensive care units. The theory of planned behavior framed the analysis of factors contributing to behavior to identify predictors of behavioral intentions. Predictors were analyzed using Student t test for significance, and variables with a P value of 0.05 or less on univariate analysis were examined by multiple regression. Additionally, themes were identified from focus groups. Results: 53% (16/30) of surveys were returned. 37.5% of PSAs disagreed that the environment has germs associated with disease, and 25% thought that cleaning solutions were unsafe for patients. Factors predicting behavioral intent (BI) were grouped according to: 1. behavioral beliefs (BB), 2. normative beliefs (NB), and 3. control beliefs (CB). BB (P 0.01), NB (P 0.002) and CB (P 0.05) were independently associated with BI. NBs correlated most highly (R=.97) with BI compared to BB (R=.90) and CB (R=.77). The dominant themes revealed from focus groups were PSAs' commitment to the safety of patients and to meeting patient and family expectations. Conclusions: Many PSAs are misinformed about microbial environmental contamination and about the safety of cleaning products. Pleasing patients and families in a pediatric setting is a key driver of PSAs' performance intentions. Addressing knowledge gaps and attitudes when educating PSAs may improve performance and reduce environmental contamination contributing to health care associated infections.

### **Reprocessing of critical and semicritical medical devices audit project**

Linda Kingsbury; *Vancouver Coastal Health, Vancouver, BC, Canada*

Issue: The provincial health department mandated compliance with current standards for reprocessing of critical and semicritical medical devices.

Project: A comprehensive practice audit and gap analysis of reprocessing practices for medical devices, including the use of flash sterilization, was conducted. An audit tool that had been validated in two other provinces was revised and used.

Results: Standards of practice in reprocessing varied across the region and continuum of care. Audit results identified a lack of specialized training for reprocessing, competency checking and supervision. Some reuse of single use medical devices was identified and the practice stopped. Sterility assurance, flash sterilization and high level disinfection required improved practices. Chemicals were often inappropriate for the purpose, not handled in a safe manner, and not labeled with date opened and expiry date. Space constraints, outdated equipment, equipment maintenance, communication and standardized education were particular challenges. Increased inventory of medical devices was required to ensure adequate time for appropriate reprocessing. Some sites chose to centralize reprocessing, i.e., send medical devices to a central reprocessor rather than update sterilization equipment and training. The need for development and dissemination of regional policies and protocols was identified.

Lessons Learned: Quality assurance projects are valuable in elevating the level of practice and knowledge, and provide a means of measuring and recognizing improvement.

## **Assessment of Infection Control and Occupational Health Needs in a Large Ambulatory Care Centre**

Linda Kingsbury<sup>1</sup>, Sydney Scharf<sup>1</sup>, Ronaldo Fujii<sup>1</sup>, Kun Zhao<sup>1</sup>, Catherine Kidd<sup>1</sup>, Annalee Yassi<sup>1</sup>, Elizabeth Bryce<sup>1</sup>  
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<sup>3</sup>*University of British Columbia, Vancouver, BC, Canada*, <sup>4</sup>*University of British Columbia, Vancouver, BC, Canada*,  
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<sup>7</sup>*Vancouver Coastal Health, Vancouver, BC, Canada*

**Issue:** Patient service delivery is increasingly shifting to ambulatory care. There are no models of how to implement an occupational health and infection control program in a multi-partnered healthcare ambulatory environment, particularly with both public and private sector partners. The aim was to develop a comprehensive collaborative occupational health and infection control program that meets the needs of all partners, patients and visitors in this ambulatory care building.

**Project Methods:** We used three means of gathering information: (1) key informant interviews, (2) workplace inspection; (3) staff survey.

**Results:** Results from key informant interviews identified needs related to organizational issues, physical environment, and education/training. Staff survey results showed deficits in knowledge of infection control practices, safe sharps handling, how to contact either OHS or Infection Control. Audits revealed lack of signage, hand hygiene stations and soiled utility rooms, as well as inconsistent practice in cleaning patient care equipment and use of personal protective equipment. Recommendations were developed and are being communicated to management and staff. Implementation of the recommendations began with staff education sessions and infection control consultation.

**Lessons Learned:** Infection control and occupational health needs exist in ambulatory care settings, and a collaborative approach is welcome in a private-public partnership.

## **Measuring Resources and Activities for Infection Prevention and Control in Ontario, a Provincial Survey across Five Healthcare Sectors.**

Colleen Nisbet, Madeleine Ashcroft, Anne Bialachowski, Nora Boyd, Isabelle Langman, Grace Volkening  
*Regional Infection Control Networks, Ontario, Canada*

**Issue:** As Regional Infection Control Networks became established in Ontario and began strategic planning a need was identified to learn more about current infection control resources and activities within each region.

**Project:** To address this issue the networks facilitated a province-wide survey that provided both provincial and regional data. This research was designed to assess a variety of issues including, but not limited to, Infection Prevention and Control (IPAC) personnel, formal instruction, professional development, medical support, IPAC Committee activities and access to information.

The questionnaire was developed for five healthcare sectors - Acute Care, Non-Acute Care, Emergency Medical Services, Community Care, and Public Health. The questionnaires were tailored to address sector-specific issues, but designed to ensure most questions were common to all.

The survey was mailed to 1064 organizations in Ontario. 641 organizations (60%) filled out and returned the questionnaire. All results were collected, analyzed and reported by Research Strategy Group Inc.

**Results:** The results of this survey demonstrated IPAC strengths and weaknesses. Gaps such as a lack of formally trained professionals, time and resources for staff training and ability to manage conflicting IPAC priorities were identified. Strengths noted included access to internet, use of IPAC networks and healthcare libraries.

Lessons Learned: An inventory of infection prevention and control resources now exists in Ontario. This inventory has become an essential tool in informing the strategic planning of regional infection control networks. In the long term, we hope to use this report to measure IPAC resource changes and improvements over time.

## **Hand Hygiene - A Change in Culture**

Mirza Ali, *Scarborough Hospital, Toronto ON, Canada*

An ambitious hospital-wide hand hygiene program rolled out in mid 2007 changed direction many times during its course, overcoming challenges, push back, limited funding, low compliance and an old mindset.

This presentation explains program launch, raising awareness, promoting the program throughout the facility, types of interventions, duration, what worked, how measurable indicators changed, how best to use corporate resources to meet program objectives.

Our experience with this taught us how to get baseline data, draw timelines for interventions, bring about change in culture, set small goals, how to sustain the program and maintain momentum

Lessons learned in this carry a take-home message for those wishing to embark on a new or jumpstart an ongoing hand hygiene program in any healthcare facility.

From this project we also learned how to get physicians on board to support the program by being champions & nominate staff members to be the faces of hand hygiene

Diverse staff culture spread across two sites and the large mix of community we serve brought on many challenges. Despite all this, we achieved our objectives, on some units within a short time.

To summarize, this presentation offers a simple get-started kit, projected timelines, expected results, a checklist & measurable indicators.

## **Quality Audit of National Methicillin Resistant *Staphylococcus aureus* (MRSA) Surveillance Data: Key Findings and Recommendations for Improvement**

Leslie Forrester<sup>1</sup>, Linda Pelude<sup>2</sup>, Marianna Ofner-Agostini<sup>3</sup>, John Koch<sup>2</sup>, Saeed Ghahreman<sup>4</sup>, Katie Cassidy<sup>2</sup>, Zahir Hirji<sup>5</sup>, Kathryn Bush<sup>4</sup>, Christine Weir<sup>2</sup>, Joseph Vayalumkal<sup>6</sup>, Stephanie Leduc<sup>2</sup>, Elizabeth Henderson<sup>4</sup>

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**Introduction:** The Canadian Nosocomial Infection Surveillance Program (CNISP) has conducted surveillance for incident cases of MRSA in sentinel hospitals since 1995. The utility of these data is dependent on its quality. Since 2004, a web-based system for data input has been used. In 2007, a data quality audit of the 2005 MRSA data was conducted.

**Methodology:** Note validation (replicate data collection) with stratified random sampling was used to obtain the comparison data for the audit. In 2005, 5536 cases were submitted to CNISP from 44 hospitals (range=1-538; median=83). A proportional sample (up to 25%) of submitted forms from each site was randomly selected. Audit data were manually entered into an electronic database containing the sample of original data. The original data were compared to the replicated data for congruence on seven key variables.

**Results:** Audit data were received from 32/44 hospitals (73%), providing 443/611 of the case forms requested. Of these, 397 (90%) had matching case identification numbers. Errors ranged from 3.5-5.3% for gender and date of

birth and increased to 14.4-23.7% for less well-defined variables (i.e. culture reason, where MRSA was acquired, specimen site, severity, other infection).

**Conclusions:** Date variables can be improved by incorporating date formats that reduce error (e.g. 24-JAN-2009). Provision of standard definitions with practical examples and training of data collectors may improve data quality for variables that require clinical judgment. A data quality framework with quality assurance practices, including ongoing auditing will be integrated into CNISP's surveillance programs.

### **Superbugs: A Nightmare on Your Hands**

Nora Boyd, Laura Fraser, Holly Teseelaar, Carol Annett; *Regional Infection Control Network, Windsor, Ontario, Canada*

**Issue:** There are few resources for front line staff in long term care for infection prevention and control particularly on hand hygiene and glove use.

**Project:** In Ontario, 75% of direct care in nursing homes is provided by personal support workers (PSWs). Focus groups were held with PSWs and managers in Erie St Clair to determine education needs for infection prevention and control. Needs expressed by PSWs were fear of acquiring MRSA and C.difficile. Managers were concerned about glove use. Using Nadine Jane's theory of how PSWs learn in the moment, an education session for PSWs was created and delivered: 32 sessions and 400 PSWs to evaluate content and delivery. A professional film company took the content and created a short DVD to provide standardized accessible education to PSWs in nursing homes on hand hygiene and glove use. The DVD, *Superbugs, A Nightmare On Your Hands*, has been distributed across Ontario.

**Results:** Using adult learning principles and Nadine Janes theory resulted in positive evaluations. Although only 58% indicated an increase in knowledge on the topic;

- 99% enjoyed the presentation;
- 98% reported it was a good use of their time;
- 99% felt the teaching methods were effective and
- 100% reported their questions on the topic were answered.

The DVD evaluation results showed 100% of nursing homes reported it to be a useful educational tool.

**Lessons Learned:** An IPAC resource was successfully created. Further evaluation of the resource in terms of changing practice is required.

### **Visitor Hand Hygiene Campaign**

Nora Boyd, Laura Fraser, Sadie MacDonald, Line Lauzon, Holly Teseelaar, Carol Annett, Cathy Egan, Ellen Otterbein; *Regional Infection Control Network, Windsor, Ontario, Canada*

**Issue:** In Canada, it is estimated that infections acquired in healthcare kill 8,000-12,000 people each year. The primary measure to reduce healthcare associated infections is hand hygiene. Alcohol based hand rub (ABHR) is the most effective method for hand hygiene. Nursing homes have signage and alcohol based hand rub at the entrances. Visitors often do not use it.

**Project:** A visitor hand hygiene campaign was undertaken to highlight its importance during outbreak season in nursing homes. Using a campaign created by the Waterloo Wellington Infection Control Network, the Erie St. Clair Infection Control Network partnered with Public Health and the nursing homes on a visitor hand hygiene campaign. Using social marketing and a simple message, visitors and staff were asked to perform hand hygiene upon entering

the home to keep our residents safe. A banner of signed hands was left in the home as a reminder of the importance of hand hygiene. The campaign used personal interaction, one clear message "Just Clean Your Hands," a signed commitment and visual prompts. Media releases enhanced communication with the community.

**Results:** The campaign and partnership was positive, beneficial, simple and fun. 35 nursing homes participated with 50-120 hands signed at each home. Media coverage amplified the message through the community.

**Lessons Learned:** Further evaluation is required to see if engagement is effective in changing behaviour over time. There are few ways of measuring hand hygiene compliance available in nursing homes.

### **Case Cluster of Cellulitis Associated with Hypodermoclysis in a Geriatric Complex Continuing Care Unit**

Heather Candon, Jane Van Toen, Bryan Morales; *Baycrest, Toronto, ON, Canada*

**Background:** As of September 1, 2008 Ontario hospitals were mandated to replace hollow-bore needles with safety engineered devices. In following this directive, Baycrest Centre for Geriatric Care implemented the use of a needle-less safety equivalent facility wide. Upon switching to the needle-less system, a cluster of hypodermoclysis-related cellulitis cases developed over a three month period on a complex continuing care (CCC) unit. A prospective, quasi-experimental before-after assessment design was used to evaluate the effects of a multi-faceted intervention in reducing the incidence of hypodermoclysis-related cellulitis in residents of a CCC unit.

**Method:** The multi-faceted intervention consisted of the following: educational in-services on the safety engineered devices for nurses to reinforce best practice techniques; implementation of checklist auditing tool to monitor procedure, frequency and duration of hypodermoclysis; updating nursing skills package; upgrading to 2% chlorhexidine gluconate skin preparation solution; switched from Y-adapter to a single-port system. The main outcome measure included the number of diagnosed cellulitis cases on the unit post-intervention.

**Results:** From September 1<sup>st</sup>-November 31<sup>st</sup> 2008, 7 cases of cellulitis were documented due to hypodermoclysis. Post-intervention, one case of hypodermoclysis-related cellulitis occurred. The frequency of hypodermoclysis events pre-intervention was 18.4 per 1000 patient days versus post-intervention at 19.2. The hypodermoclysis-related cellulitis incidences on the unit decreased significantly from 2.3 pre-intervention to 0.3 post-intervention per 1000 patient days ( $p < 0.05$ , Fisher's exact test).

**Conclusion:** A multi-faceted intervention was successful in reducing the incidence of cellulitis associated with hypodermoclysis on a CCC unit in a geriatric facility.

### **Hand Hygiene Compliance Using the 'Just Clean Your Hands' Campaign's Auditing Tool: Actual Rates versus Perceived Rates of Compliance on Two Units of a Large Community Hospital.**

Claudia Crusell-Balogh<sup>1,2</sup>, Diane Wallace<sup>1</sup>, Ruth Shertzberg<sup>1</sup>, Chris Mitchell<sup>1</sup>, Marie Singh<sup>1</sup>, William Ciccotelli<sup>1</sup>  
<sup>1</sup>*Grand River Hospital, Kitchener, ON, Canada,* <sup>2</sup>*University of Waterloo, Waterloo, ON, Canada*

**Issue:** To investigate actual versus perceived compliance rates for Hand Hygiene amongst Health Care Workers (HCWs) on two units in our large community hospital. Actual rates of hand hygiene compliance vary greatly between HCWs on different units; perceptions have a large role in determining compliance rates.

**Project:** Hand Hygiene compliance rates were calculated using the Just Clean Your Hands auditing tool provided by the Ministry of Health and Long Term Care (MOHLTC). A survey tool, based in part on the MOHLTC's Assessment Tool for Health Care Provider Hands, was offered to all HCWs on each unit by an Infection Prevention and Control (IPAC) auditor.

**Results:** Surveys on Hand Hygiene were administered to a total of 37 HCWs from both programmes. A total of 633 opportunities were collected; the compliance rate in the NICU was 66.7% and the Surgical Programme was

27.2%. One hundred percent of respondents overestimated their hand hygiene compliance rates based on their unit's average rate of compliance. Interestingly, HCWs from the NICU had more realistic perceptions of both their unit's hand hygiene compliance as well as the hospital-wide compliance rates.

Lessons Learned: The perceived rates of compliance with hand hygiene varied greatly between units with a greater discrepancy on the unit with the lower rate of compliance; this may present barriers to motivational efforts to increase hand hygiene on some units.

## **PARTNERS IN PREVENTION: PARAMEDICS AND HEALTH UNITS PARTNER TO PROVIDE INFLUENZA IMMUNIZATION TO THE COMMUNITY**

Greg Bruce<sup>1</sup>, Laurie Stanford<sup>2</sup>; <sup>1</sup>County of Simcoe Paramedic Services, Midhurst, Ontario, Canada, <sup>2</sup>Simcoe Muskoka District Health Unit, Barrie, Ontario, Canada

**Issue:** In October 2000 Ontario initiated a universal influenza immunization program (UIIP) providing free vaccine to all residents. Ontario Health Units were given the responsibility for offering influenza vaccine to residents and have been meeting this mandate by providing clinics in a variety of community settings since the programs inception. Marginalized and high risk members of the community may not be inclined to attend Health Unit clinics and as a result not receive immunization. Paramedics have regular contact with these residents as patients and through an established relationship of trust are uniquely positioned to provide immunization thereby increasing the coverage rates of a population at risk for influenza. **Project:** Paramedic services in Toronto and the County of Simcoe partnered with local Health Units identifying organizations serving marginalized and high risk populations. Targeted organizations included those serving the homeless and under housed, senior's organizations and emergency service partners. Immunization clinics were scheduled and conducted by Paramedics at the venues frequented by the population these organizations serve. **Results:** The number of clinics and the client numbers have increased since the programs inception. Toronto clinics increased from 73 clients in 2000 to 1703 in 2004 and County of Simcoe Clinics increased from 495 clients in 2006 to 982 in 2008. **Lesson Learned:** Providing access to influenza vaccine at venues frequented by marginalized and high risk populations can improve influenza immunization rates for this population. Familiarity with Paramedics and convenience contributed to increased vaccine uptake, leading to the success of the Health Unit/Paramedic Service partnership.

## **Positive impact of prospective surveillance and a multifaceted surgical site infection (SSI) reduction program to reduce SSIs in gastrointestinal cancer surgeries**

Fatema Jinnah, Sandra Callery, Mary Vearncombe; Sunnybrook Health Sciences Centre, Toronto, Ontario, Canada

**Background:** Surgical site infections (SSIs) are common nosocomial infections in surgical patients. SSIs in colorectal surgery have high morbidity, increasing of length of stay, increasing hospital costs and impacting quality of life. SSI surveillance with feedback has been shown to reduce SSI rates.

**Method:** Prospective surveillance on all elective colorectal (CRC) and hepatobiliary and pancreatic (HB&P) cancer surgeries started in January 2007 when baseline SSI rates were collected. Interventions to reduce SSIs included: timing of prophylactic antibiotics, maintaining normothermia, pre-operative clipping, hand hygiene and the introduction of chlorhexidine in alcohol (CHG) skin-prep solution. Surveillance results on SSI rates and process indicators were provided to the SSI team during regular meetings and surgeon specific rates were given to individual surgeons.

**Results:** Baseline SSI rates were: CRC 15.8% and HB&P 28.2%. Post-intervention (October to December 2008) SSI rates were: CRC 12.0%, and HB&P 3.3%. The overall severity of infection was also reduced post-intervention. Compliance rates of prophylactic antibiotic timing and normothermia maintenance increased from 64.2% and 42.8%, respectively, in December 2006 to 92% and 71%, respectively, in October 2008.

**Conclusion:** The introduction of prospective surveillance, multifaceted interventions with prompt feedback of SSI rates and process indicators to the SSI team and surgeons was effective in reducing the rate of SSIs associated with gastrointestinal cancer surgeries.

### **An Innovative Cross-Regional Infection Prevention and Control and Occupational Health and Safety Partnership to Address Staff Influenza Vaccination Rates**

Madeleine Ashcroft<sup>1</sup>, Risa Cashmore<sup>1</sup>, Ruth Collins<sup>2</sup>, Julie Fischer<sup>3</sup>, Doreen Foster<sup>4</sup>, Jennifer Gilland<sup>5</sup>, Anne Kubacki<sup>6</sup>, Edna Laming<sup>7</sup>, Dana Marelic<sup>8</sup>, James Prang<sup>9</sup>, Pam Siddall<sup>3</sup>, Alexis Silverman<sup>2</sup>, Brenda Smith<sup>10</sup>, Debbie Valickis<sup>2</sup>, Jo Zupnik<sup>11</sup>

<sup>1</sup>Mississauga Halton Infection Control Network, Mississauga, ON, Canada, <sup>2</sup>Peel Public Health, Brampton, ON, Canada, <sup>3</sup>Trillium Health Centre, Mississauga, ON, Canada, <sup>4</sup>Wellington Dufferin Guelph Health Unit, Fergus, ON, Canada, <sup>5</sup>Halton Healthcare Services, Oakville, ON, Canada, <sup>6</sup>Halton Region Health Department, Oakville, ON, Canada, <sup>7</sup>William Osler Health Centre, Brampton, ON, Canada, <sup>8</sup>Toronto Public Health, Toronto, ON, Canada, <sup>9</sup>Headwaters Health Care Centre, Orangeville, ON, Canada, <sup>10</sup>Central West Infection Control Network, Brampton, ON, Canada, <sup>11</sup>The Credit Valley Hospital, Mississauga, ON, Canada

**Issue:** Since the introduction of universal free vaccine in Ontario, public and long-term care facility staff influenza vaccination rates have increased, while hospital staff rates have remained stagnant. Staff vaccination impacts patients and is a shared concern for occupational health and safety (OH&S) and infection prevention and control (IPAC) professionals in facilities, public health unit staff, and Regional Infection Control Networks (RICNs). IPAC and OH&S program partnership was critically emphasized in The SARS Commission Final Report (2006).

**Project:** The staff of two adjacent RICNs in Ontario joined the OH&S department leads and IPAC professionals from all five hospital corporations and four public health units in summer 2008 to brainstorm strategies, share policies and procedures, and reach consensus on shared immunization record cards, promotional messaging and materials such as banners, pins, and t-shirts.

**Results:** While the 2008-2009 season vaccination rates have not risen significantly above the previous years' in the hospitals, the trend is upwards. The group acknowledge the mutual support gained from this initiative, and that this is but the first step in a focused and collaborative effort to mitigate the ongoing challenge of influenza in our communities.

**Lessons Learned:** As health care workers in our regions tend to work across organizations, the group recognizes that consistent and standardized messaging is advantageous to demonstrate solidarity across regions. This initial networking provided evidence that long-standing organizational boundaries can be overcome in the interests of best practices for protecting the health of workers and patients, and OH&S and IPAC joint endeavours.

### **STREAMLINING FEBRILE RESPIRATORY ILLNESS SURVEILLANCE; NOTHING TO SNEEZE AT!**

Angela Wigmore, Natalie Bruce, Virginia Roth, Kathryn Suh; *The Ottawa Hospital, Ottawa, Ontario, Canada*

**Issue:** Surveillance for febrile respiratory illness (FRI) is an essential part of nosocomial respiratory infection prevention. Despite this, FRI surveillance is labour intensive. At the Ottawa Hospital (TOH) FRI surveillance has included a screening process on patients admitted to hospital. In addition, Infection Prevention and Control (IPAC) has reviewed all admission diagnoses and reviewed charts on all patients who had 1 of the 13 diagnoses suggestive of FRI. **Project:** TOH IPAC team developed an action plan to streamline FRI surveillance and increase healthcare professionals' (HCPs) awareness of FRI for 2008-09. This plan included surveillance, education and communication strategies. We reviewed the diagnoses of influenza cases from 2007-08. A FRI education curriculum was developed and piloted on 10 units. A FRI algorithm was developed to assist HCPs. FRI was highlighted at the annual nursing skills day. A communication strategy was developed including poster distribution, correspondence to management, and access to electronic teaching materials. **Results:** On review of influenza cases from 2007-08 the 3 most common admission diagnoses were pneumonia, viral respiratory illness and COPD. Prospectively applying streamlined surveillance in 2008-09 we have eliminated 10 of the 13 (76%) admission

diagnoses which prompted chart review and reduced workload. Through communication to management we were successful in having FRI highlighted on the annual corporate education plan. Over 1180 staff received FRI education during the 2008-09 season. **Lessons learned:** Critical review of existing FRI surveillance identified inefficiencies and significantly decreased workload. A multi-level strategy for FRI education and communication was successful in reaching many within the hospital setting.

**The Standardization of Infection Control Guidelines and Practices for Emergency Departments within Capital Health \*Murray RN ICP, Daphne; Darrow RN, Debbie; Clory MDCM: CCFP (EM), Michael; Coshell RN  
HSM, Lillian, MacDonald RN, ICP, HSM, Sheila**

Daphne Murray, Debbie Darrow, Michael B. Clory, Sheila MacDonald, Lillian Coshell  
*Capital Health, Halifax, Nova Scotia, Canada*

**Issue:** When patients present to the emergency department, the combination of severe illness, the busyness, and the application of special precautions can cause a great deal of angst for patients, their families and the emergency staff. We noticed staff had increased anxiety trying to figure out precautions, bed placement etc.

**Project:** We recognized the need to simplify strategies in this unpredictable environment. Recognizing that not all of Infection Control practices are easily implemented within the confines of a busy emergency department. The objective of this project was to support staff and patients by providing a standardized reference on infection control precautions for all of the Emergency Departments throughout Capital Health. The ultimate goal was to improve the quality of care, build capacity, and enhance staff knowledge, by creating a well-defined, standardized infection control, practice reference.

**Result:** This poster is an example how different professions have successfully collaborated, putting the care of patients and families first. We collectively created a poster that is large enough in print to see from the foot of a stretcher, provides current Infection Control practices and examples of illnesses in that category.

**Lessons Learned:** Staff display confidence in their decision-making; they understand the information is limited on this poster

**If You Can't Clean It, You Can't Sterilize It: New Edition of a Canadian Standards Association (CSA) Standard is Released to Assist Health Care Facilities in Decontamination of Reusable Medical Devices**

Susan Lafferty<sup>1</sup>, Grace Rylett<sup>2</sup>; <sup>1</sup>*Regional Infection Prevention and Control Program, Alberta Health Services, Edmonton, AB, Canada,* <sup>2</sup>*Canadian Standards Association, Mississauga, ON, Canada*

**Issue:** With numerous media reports of increased risk to patients and the public resulting from breaches in practices of reprocessing medical devices, revision of the 2000 version of CSA Decontamination of Reusable Medical Devices began in 2004 with a mandate to expand the content and detail in the standard that would provide Canadian medical device reprocessing (MDR) and Infection Prevention and Control (IPC) personnel with a useful tool upon which to base policies and procedures.

**Project:** Proposed enhancements to the standard that included information on endoscopic devices, mechanical cleaning and disinfection equipment, Routine Infection Control Practices, quality systems, medical device alerts, water quality and annexes to assist MDR staff with implementation of the requirements of the standard were considered. A working group consisting of thirty-three expert members from MDR, operating room, endoscopy, microbiology, infection control, industry and regulatory bodies began work on revision of the standard in 2004.

**Results:** The new version of the standard, containing the above detailed information regarding the decontamination phase of medical device reprocessing was published in March, 2008 following extensive review by the CSA Sterilization Technical Committee and the public.

**Lessons Learned:** Incorporating a substantive amount of additional information, in addition to resolving comments from multiple sources, delayed the publication of the standard past the target date of December, 2005. Revisions to the next edition of the standard will commence at least 2 years prior to the next targeted publication date of 2013.

## **INITIATIVES TO IMPROVE HEALTHCARE WORKER INFLUENZA VACCINATION YIELDS PROMISING RESULTS**

Silvana Perna, Pearl Orenstein, Anne Desmarais, Barbara Amihod, Norma Consolacion, Sharon Gates, Mark Miller; *Jewish General Hospital, Montreal, Quebec, Canada*

**Issues:** The Jewish General Hospital (JGH) is a 637 bed tertiary care hospital in Montreal with approximately 5000 employees. At the JGH, an annual flu vaccine campaign is organized. In 2007 our vaccination rate of 1436 healthcare workers (HCW) was far from the desired 60 per cent vaccination rate set by Public Health. Our goal was to improve this year's vaccination rate among HCWs. During the 2008-09 influenza season, various outreach efforts were made to promote influenza vaccination.

**Project:** A timeline, including a detailed list of tasks to be accomplished, personnel responsible, and deadlines, was created at the end of the influenza season in 2007. The three main events included: public vaccination of "VIPs" who were photographed while receiving their flu shot, influenza presentation at medical Rounds by an Infectious Diseases physician with lunch and door prizes provided, followed by employee vaccinations, and finally, the names of all employees who gave proof of vaccination were entered into a draw for major prizes. Other promotional events included: advertisement in our newsletter, repeated pay slip messages, posters and pamphlets on units and in public areas, pharmacy updates and in collaboration with Health Services, vaccination carts circulated throughout the units during all three shifts.

**Results:** 1896 employees were vaccinated, including 456 nurses and 124 physicians (excluding residents and students) compared to 358 and 109 respectively in 2007.

**Lessons learned:** We believe that this campaign was successful because of the multiple strategies used, the major prizes given and the support received by upper management.

## **HAND HYGIENE EDUCATION**

Barbara Catt, Olivia Yow, Sandra Callery, Mary Vearncombe; *Sunnybrook Health Sciences Centre, Toronto, Ontario, Canada*

**Background:** Hand hygiene (HH) is essential to patient safety and is the single most important method to prevent the spread of infections. Effective April 2009, all hospitals in Ontario must publicly report HH compliance rates. SHSC is a tertiary teaching facility. Education sessions were adapted from Your 4 Moments of Hand Hygiene in the Just Clean Your Hands campaign from the Ontario Ministry of Health and Long-Term Care (MOHLTC) and were piloted on 2 acute inpatient units, 1 medical and 1 surgical.

**Methods:** Before the sessions, the following took place: baseline audits of HH compliance, placement of alcohol-based-hand-rub (ABHR) at point-of-care (POC), with visual prompts. The sessions consisted of senior leadership participation; perception survey; lecture; video; team game; case scenarios. Unit-specific HH compliance was provided and staff were asked for ways to improve compliance on their unit.

**Results:** The 4 sessions had 108 participants including all health care worker (HCW) disciplines. The medical and surgical unit rates before the sessions were 33% and 45% respectively. Three months after the sessions, compliance was 52% and 81% respectively.

**Discussion:** Our results support the literature that a multifaceted-program-approach will help to improve HH compliance. This consists of actively involving influential decision-makers in and providing HH education to HCWs,

supported by environmental changes such as ABHR at POC, visual prompts and ongoing HH audits with immediate feedback to the HCW.

## HEALTH CARE WORKER PERCEPTIONS ON HAND HYGIENE COMPLIANCE

Barbara Catt, Olivia Yow, Sandra Callery, Mary Vearncombe; *Sunnybrook Health Sciences Centre, Toronto, Ontario, Canada*

**Background:** Hand hygiene(HH) is essential to patient safety and is the single most important method to prevent the spread of infections. SHSC is a tertiary teaching facility. Education sessions were adapted from Your 4 Moments of Hand Hygiene in the Just Clean Your Hands campaign from the Ontario Ministry of Health and Long-Term Care (MOHLTC). Sessions were piloted on 2 acute-care units, 1 medical and 1 surgical.

**Methods:** The pilot consisted of 4 four-hour sessions. Baseline audits for HH compliance were collected using a standardized, validated audit tool before the sessions. A perception survey was completed before the sessions. Attendees anonymously answered questions on previous HH education, health care worker (HCW) type, perceptions of personal and colleague HH compliance rate.

**Results:** 89/109 (82%) of the attendees participated in the survey. 65% of the participants perceived their personal HH compliance to be in the range of 75-100%. 50% of the participants perceived their colleagues to have HH compliance in the range of 51-75%. However, the observed HH compliance was 33% for the medical and 45% for the surgical unit.

**Conclusions:** HCWs often overestimate their personal HH compliance. Most perceive their own HH compliance to be higher than their colleagues' and their actual compliance. Integration of a perception survey into the education session demonstrates that what we perceive we are doing does not reflect actual practice.

## Provincial Surveillance of *Clostridium difficile* Infections: The B.C. Experience

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BC's Provincial Infection Control Network (PICNet) is implementing standardized provincial surveillance for *Clostridium difficile* infections (CDI) in all acute care facilities across all Health Authorities (HAs) in the province. The web-based system enables facilities to upload CDI data, devoid of personal identifiers, to the PICNet database. The surveillance will enable tracking of provincial rates and trends of CDI over time and determine risk factors and estimated morbidity and mortality. Standardized surveillance will allow for the establishment of benchmarks to assist facilities in improving infection control practice and, ultimately, patient care. In collaboration with the HAs and the BC Ministry of Health, aggregate provincial rates and trends will be made publicly available.

BC's approach to establishing provincial CDI surveillance is unique. Case definitions and a minimal data set were determined using a collaborative approach, inclusive of all end users. The surveillance is voluntary and interfaces with existing databases where they exist avoiding the need for duplicate data entry. Where a facility did not have a database, one was provided. Participation Agreements outlining data ownership, privacy issues, and roles and responsibilities of all partners have been signed. Separate HA IMIT systems, and the navigation of provincial privacy legislation, have made sharing data across HA borders challenging, but still feasible.

We offer insights into the system development process, and an overview of the system. We highlight the agreed-upon case definitions and minimal data set, and include screen shots of the PICNet surveillance system and a template of the provincial aggregate reports.

## **INFECTION PREVENTION AND CONTROL (IPAC) INTERVENTIONS DURING A RESIDENTIAL SUMMER CAMP OUTBREAK**

Amanda Knapp, Fairleigh Seaton, Joanne McGurn, Marg McReynolds  
*Kingston, Frontenac and Lennox & Addington Public Health, Kingston, ON, Canada*

**Issue:** In the summer of 2008 a children's residential summer camp experienced an outbreak of gastroenteritis where 25 campers and 38 staff became ill. Staff and campers from multiple cabins and offsite canoe trips were affected. Compounding the problem was the facility's limited information regarding outbreak control and the inadequate response by camp management which included not informing parents. The outbreak continued over multiple camp sessions and some had multiple episodes of illness. Consequently, it was necessary for Public Health to take a more active role in preventing the spread of illness.

**Project:** In response to the outbreak a public health nurse, public health inspector and infection control practitioner visited the camp, identified areas for concern, and provided hand sanitizer and disinfecting wipes. Staff education and training on IPAC practices was conducted at a second visit. However, camp actions were ineffective following the initial interventions and the outbreak continued. Due to these issues a Section 22 Order under the Health Protection and Promotion Act was issued by the Medical Officer of Health outlining required actions to stop the spread of illness.

**Results:** After the required actions were implemented no further cases occurred.

**Lessons learned:** From this outbreak investigation it was determined that camp staff and management have very limited knowledge of IPAC procedures. This led Public Health to realize the need for increased training of camp staff. In the spring of 2009 a resource binder and training session will be introduced for residential and day camp settings.

### **A Toolkit to "Stop the Spread"**

Alison Chant<sup>2</sup>, Marney Hunt<sup>1</sup>, Robyn Hunter<sup>3</sup>, Kevin Noel<sup>4</sup>, Eva Thomas<sup>3</sup>, Marisa Nichini<sup>1</sup>, Ghada Al-Rawahi<sup>1</sup>  
<sup>1</sup>*Children's and Women's Health Centre, BC, Canada,* <sup>2</sup>*BC Cancer Agency, BC, Canada,* <sup>3</sup>*Provincial Health Services Authority, BC, Canada,* <sup>4</sup>*Kevin Noel Communications, BC, Canada*

**Background:** Strict adherence to hand hygiene is the best way to prevent health-care-related infections.

British Columbia's Provincial Health Services Authority (PHSA) Infection Prevention and Control team developed its hand hygiene campaign in 2008, with plans for a phased implementation at all PHSA agencies. Recognizing that the campaign implementation requirements might be different for each agency/location, an overall implementation toolkit was developed to assist the team with each launch.

**Objectives:** The toolkit was designed to provide a step-by-step approach to implementing the hand hygiene campaign.

**Methods:** The toolkit is designed for flexibility since the implementation requirements for the campaign may be different for each location. Agencies are encouraged to choose the tactics and materials that best suit their needs, while respecting the overall strategic priorities of the campaign. This entails promoting the campaign through display of its unique graphic identity materials and through internal communications to staff in support of the campaign. The toolkit includes a detailed action plan with time-lines to use before and during the launch as well as a list of supporting materials and resources.

**Results:** The toolkit has 3 major versions. The first version captured all the communications pieces and formed a timeline of sorts to document the flow of the campaign. Additional versions captured step by step details.

**Conclusion:** The five year life expectancy for the campaign means a living document such as the toolkit is a valuable resource, a record of what was done and what is planned to sustain a HH campaign over the long term.

## **INFLUENZA IMMUNIZATION AMONG STAFF AND VOLUNTEERS AT TWO LONG-TERM AND RESIDENTIAL CARE FACILITIES**

Jackie Ratzlaff, Leslie Forrester, Gail Busto, Mitra Eshghpour; *Vancouver Coastal Health, Vancouver, BC, Canada*

**BACKGROUND:** Yearly influenza Immunization is an expectation for those persons working in healthcare. Historically, immunization rates have been suboptimal.

**OBJECTIVES:** To 1) examine influenza immunization history 2) ascertain immunization intentions 3) identify reasons for not getting immunized.

**METHODS:** Hard copies of a brief survey were circulated to staff and volunteers over a three-week period. The initial survey was undertaken in Fall 2003 and replicated in Fall 2008.

**RESULTS:** In total, 398 survey responses were received, 221 (56%) in 2003 and 177 (44%) in 2008. A total of 51% of responses were from Nursing, 10 % from both Dietary and Volunteers, 9% from Allied Health, 5% from Housekeeping and 13% from Other.

In 2008, there was a statistically significant increase in the proportion of respondents who reported that: a) they had their influenza shot every year (44% in 2003 to 62% in 2008) b) they had been immunized in the previous year (71% in 2003 to 83% in 2008) and c) they did or they planned to get immunized (74% in 2003 to 81% in 2008). The main reasons for not getting immunized involved concerns about side effects and personal beliefs. By survey year, there were no differences in reasons for not getting immunized.

**CONCLUSIONS:** There was a statistically significant increase in the proportion of staff that reported getting immunized in 2008 compared to 2003. There were no differences in the reasons reported for not getting immunized. Future educational strategies will focus on interventions to allay fears about side effects.

## **BETWEEN A ROCK AND A HARD PLACE: CHALLENGES GETTING EVALUATION TOOLS TO EMERGENCY HEALTH SERVICES**

Barb Goulet, Marg McKenzie  
*Emergency Medical Services, City of Edmonton, Canada*

**Issue:** Inception of a CHICA Prehospital Care Interest Group in 2006 created the opportunity to promote evaluation of quality of care, practice, and education related to IP&C in prehospital care services. A survey to identify need and an audit tool to meet this need were developed. While trialing, major challenges related to distribution were identified.

**Project:** Survey tool consisted of practice checks to identify areas for improvement and future action. Circulated electronically to services through provincial, regional and municipal agencies in western provinces, managers responsible for IP&C were to return the tool with anonymity. Audit followed, designed to identify strengths, weaknesses and opportunities for improvement. Distributed after the Survey to test for ease of use and content relevance, contacts in major urban areas were used.

**Results:** Survey results were disappointing prompting closer look at distribution methods. Audit tool was reviewed by ICP's with interest in prehospital care. Awaiting CHICA approval.

**Lessons Learned:** Are IP&C documents perceived as important when distribution requested? Is a responsible person within a service identifiable? Medical Directors direct standard of practice. Is this an avenue for distribution? EMS Chiefs of Canada are supportive but do not reflect all services. Their website has challenges in access and maintenance. Lack of familiarity with interactive electronic documents proved frustrating. We continue to seek answers to these questions for the most effective distribution routes.

**A Comparison of Two Methods for Auditing MRSA and VRE Admission Screening** Pikula Z., Kim D., Ng W.\*, Currie A., White D. and Katz K. North York General Hospital, Toronto, Ontario

Zoran Pikula, David Kim, Ng Wil, Currie Andrea, White Diane, Katz Kevin; *North York General Hospital, Toronto, Ontario, Canada*

**Background:** Patients admitted to hospital may potentially be colonized with MRSA or VRE. In our hospital we aim to screen all medical patients for MRSA and VRE within 24 hours of admission to the floors. Compliance with this screening is audited. Historically we have performed a point estimate of screening compliance manually on a single randomly selected day of each month. This method had obvious limitations including labour intensiveness, attribution of errors to the wrong unit and lack of timeliness.

**Project:** To address these limitations a new computer-generated methodology was introduced. This methodology correlates the time of admission with the time when screenings were performed. We compared the screening compliance rates generated by these two methodologies for the patients admitted in 2007. The mean compliance rates for the two methods were compared using two sample t-test statistic assuming unequal variances.

**Results:** The new methodology provided more precise estimates and statistically higher compliance rates than the old one (mean difference=4.67%, SD=0.98).

**Lessons Learned:** An automated computer-generated audit report provides an easy and more precise way to assess compliance with MRSA/VRE admission screening and is recommended for institutions with a well established Information System. A manual audit on a randomly selected day of the month provides an adequate alternative in the event of difficulties building an Information System automated report.

**Successful Strategies in the Fight Against Hospital Associated Vancomycin Resistant Enterococcus (VRE)**

Inez Landry, Charlie Dickey, Diane Lewis, Donna Perron; *Queensway Carleton Hospital, Ottawa, Ontario, Canada*

**ISSUE:** The investigations of Vancomycin Resistant Enterococcus (VRE) outbreaks that occurred in 2004-05 and in early in 2005-06 alerted the infection prevention and control professionals to the fact that there was a problem with contact isolation procedure compliance, environmental cleaning of the non critical patient care equipment and antibiotic prescribing practices.

**Outbreak Management :** Outbreak control measures were put into place. Strategies were introduced to address the isolation compliance, the patient care equipment and antibiotic use concerns. There were multiple working groups that provided their expertise to address the different strategies.

**RESULTS-Major Success:**

VRE Hospital Associated rate decreased from 2.2 per 1000 admitted patients in 2005/06 to 0 in 2006/07; 0 in 2007/08 and 0 in 2008/09 to date.

**LESSONS LEARNED FOR CONTINUED VRE OUTBREAK PREVENTION:**

- Multi strategies are important to decrease rates of VRE hospital associated infections.
- It is important to pilot some strategies before implementing hospital wide.
- Cleaning accountabilities are required for non critical patient care equipment.
- The ward aide position added to patient care areas has been valuable in reducing hospital acquired infections.

- Physician education on antibiotic prophylaxis made a difference in the right antibiotic being ordered for the correct amount of time.
- Education on the importance of compliance with isolation procedures and processes must be reinforced annually.
- Contact isolation personal protective equipment and enhanced cleaning protocols that were continued after the outbreaks assisted with the decrease in other AROs.

### **The Relationship of Infection Surveillance and Control Activities and Influenza Rates in Canadian Long-term Care Facilities**

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**Background:** The examination of the relationship of infection surveillance and control activities and influenza will identify strategies to reduce morbidity and mortality from influenza in LTCFs.

**Methods:** A survey was sent in 2005 to all Canadian LTCFs to assess infection surveillance and control resources and activities (In Press). Influenza rates were also assessed. Regression analysis was used to examine the association of infection surveillance and control activities and influenza rates.

**Results:** One third of LTCFs responded (34 %, 488 of 1,458). The mean influenza rate was 1.3 (SD 3.6) per 10,000 patient days. Influenza outbreaks or clusters occurred in 37 % of LTCFs in 2004. Influenza vaccinations were received by 93 % (SD 11.3) of residents. Almost all LTCFs (99 %, 424 of 429) have policies regarding the prevention and management of influenza in residents, there is a system to teach this policy to resident care staff in 93 % and a system to monitor adherence to this policy in 81% of LTCFs. Surveillance index scores ( $r = -0.15$ ,  $P = .02$ ) were negatively associated with influenza rates.

**Conclusion:** Higher levels of infection surveillance were associated with lower influenza rates. There is need for further investment in surveillance to reduce resident morbidity and mortality from influenza. The authors have reported elsewhere that infection surveillance in Canadian LTCFs does not meet recommended levels.

### **A Vascular Surgical Unit's Experience in the Improvement of Infection Prevention and Control Practices.**

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*Eastern Health, St. John's NL, Canada*

**Issue:** Infection prevention and control practices are often challenging in a surgical setting due to high number of vascular surgical procedures, high nurse patient ratios, design flaws, and a high risk patient population. This report will focus on process improvement initiatives on one vascular surgical unit in a St John's hospital focusing on increasing awareness of infection prevention practices.

**Project:** Quality assurance data identified a significant problem with MRSA: infection and transmission on this unit. Subsequently a multidisciplinary process improvement team focused on improving practices to prevent transmission. The improvement team identified the following deficiencies: education, isolation practice variances, screening and decolonizing inconsistencies, and environmental concerns including lack of dedicated patient equipment and adequate staff for equipment and environmental cleaning.

**Results:** Facilities management, environmental services, and unit staff addressed design flaws. Education sessions were held, formally and informally, with staff to review infection control practices for the vascular unit. Patient and family hand hygiene practices were improved. There has been better collaboration between

physicians and other members of the health care team. Increased staff has been allotted to enhance equipment and environmental cleaning practices.

**Lessons Learned:** Acceptance and respect of teamwork with all health care members, including patients and families, is extremely important in order to implement and maintain changes in infection control practices. Ongoing process improvement meetings within the unit should be implemented at least quarterly. An audit of the practices could be performed to keep staff aware of the needs for continuous infection prevention and control practices.

### **Posting and Discussing Hand Hygiene Compliance Audit Results with Front Line Clinical Staffs Improved Hand Hygiene Compliance in a Paediatric Intensive Care Unit**

Maja Horgas<sup>1,2</sup>, Jun Chen Collet<sup>1,2</sup>, Marney Hunt<sup>2</sup>, Rita Dekleer<sup>2</sup>, Robyn Hunter<sup>1</sup>, Eva Thomas<sup>1,2</sup>  
<sup>1</sup>PHSA Infection Prevention and Control Service, Provincial Health Service Authority, Vancouver, British Columbia, Canada, <sup>2</sup>Department of Pathology and Laboratory Medicine, Children's & Women's Health Centre of British Columbia, Vancouver, British Columbia, Canada

**Background:** Hand hygiene (HH) is one of the most effective methods for reducing health-care associated infections. Many studies have shown that HH compliance among health care workers may be as low as 30- 40%. To achieve both short and long term behavioral HH changes, we implemented a system comprised of standardized HH audits, compliance report cards. Results were discussed first with division leaders, then front line staff.

**Objectives:** The study was aimed at exploring a sustainable HH behavior change model and assessing the impact of our implemented HH interventions.

**Method:** The Paediatric Intensive Care Unit was chosen as a pilot site. A trained HH auditor performed data collection consistently for two study periods: Period I (Pre-Intervention: 10<sup>th</sup> -29<sup>th</sup> Oct.08) and Period II (Post-Intervention: 1<sup>st</sup> -29<sup>th</sup> Dec.08). Microsoft Access database was employed for data entry and storage. Data management and analysis was performed with SPSS (version 15.0).

**Results:** Period I: 339 opportunities were identified over 840 minutes of observation. Overall HH compliance rate was 47.8%. Period II: 297 opportunities were recorded over 1095 minutes of observation. The overall HH compliance rate was 67.0%.

**Discussion/Conclusion:** The HH intervention system was well received by all stakeholders and the HH compliance increased from 47.8% to 67.0%, an improvement observed across all subcategories of health care workers. Although the results are encouraging, long term follow-up and repeated assessments are necessary to know whether the increased HH compliance will persist over time and represents a true cultural change in clinical staff behavior.

### **Is it time for a glove change?**

Luce Ouellet: Ansell Canada, Cowansville, Qc, Cape Verde

**Issue:** Recommendations for glove change have been provided by many associations. Glove wear time is dependant on many factors. The goal for this review is to find scientific data identifying the effect of occlusion of different types of material on skin in time.

**Literature review:** This review will describe available scientific evidences on the impact of glove occlusion on human skin. Trans-epidermal water loss, material type, and skin integrity are some of the many factors that affects wearing time. Evidence have shown the effect of prolonged glove use on barrier properties of glove.

**Conclusion:** This review will provide participants with scientific and medical evidence in regards to prevention and different approaches in qualifying and preventing glove misuse. It is intended to enhance understanding of

healthcare personnel as it relates to glove wearing time. Finally, it is determined to provide material in a noncommercial format that satisfies the needs of CHICA.

## **INFLUENZA VACCINATION FOR HEALTHCARE PERSONNEL IN THE HOSPITAL; PROTECT THE PATIENT, BEGIN WITH YOURSELF.**

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**ISSUE:** Influenza can cause serious morbidity and mortality in hospitalized patients. Vaccination of healthcare workers can reduce this risk up to 50%. For this reason the Health Council of the Netherlands advised boards of healthcare institutions in 2007 to offer influenza vaccination to all healthcare personnel with close patient contact. In 2008 our hospital started a campaign to reach a 50% vaccination rate within three years.

**PROJECT:** A steering committee organized the campaign according to a conscientious action plan in which tasks, authorizations and responsibilities were carefully described. A publicity plan was part of the campaign. Vaccination points were situated nearby the personnel restaurant and the personnel exit. To increase compliance, entertaining activities were offered. Reported adverse effects were recorded.

**RESULTS:** The first campaign resulted in a disappointing 15.5% vaccination rate. On high care wards like oncology, haemodialysis, and intensive care, rates were 12.5%, 16.2%, and 9.2%, respectively. Surprisingly, the highest vaccination rate was found among physicians (22%). Adverse reactions were reported in 2% of vaccinated healthcare workers. A lack of adequate information was reported by several chief nurses.

**LESSONS LEARNED:** Vaccination campaigns need to be recommended to present personnel as well as to future employees. Ward visits and information sessions should be organized early in the campaign, and discussions should be started with target groups. Use of fixed vaccination sites as well as mobile teams is recommended, as well as an extension of the vaccination period. Adverse reactions should be recorded for every vaccinated employee.